



**EAGLE-  
PICHER**

# **BUILDING INSULATION**

**pneumatically applied**



● **FOR HOMES AND COMMERCIAL BUILDINGS**

**THE EAGLE-PICHER COMPANY**





# Eagle-Picher

## MINERAL WOOL BUILDING INSULATION

Eagle-Picher Insulation is a highly-efficient, heat-resistant material, blown from molten minerals at high temperatures. It is available in Granulated Wool, Type H-1, which provides maximum results using the pneumatic process of installation, and Type H-2, Loose Wool, a material used for hand-packing with a pneumatically installed job.

Eagle-Picher Insulation pays for itself in savings—it reduces fuel consumption up to 40%. It provides greater comfort and more healthful living conditions in the winter, and keeps homes up to 15F cooler in the summer.

Dark gray Eagle-Picher Mineral Wool is distinctive both in color and performance.

### WHY EAGLE-PICHER INSULATION IS OUTSTANDING

**HIGH EFFICIENCY**—An authoritative, unbiased research bureau gives Eagle-Picher Mineral Wool the low thermal conductivity of 0.27 Btu at 103 F mean temperature. This means that only 0.27 British thermal units of heat pass through a sq ft of Eagle-Picher Mineral Wool, one in. thick, in an hr, when the temperature difference between the hot and cold surface is 1 F (mean temperature 103 F).

**FIRE RESISTANT**—Eagle-Picher Insulation, a non-combustible material, forms an effective barrier to flames, gives added protection when installed in the roof and in hollow, flue-like sidewall spaces. As a result of tests conducted at Columbia University, the N.Y.C. Bureau of Buildings gave full approval to the use of Eagle-Picher Insulation "where fire retarding is required under the provisions of building code and the multiple dwelling law."

**NON-CONDUCTOR**—Eagle-Picher Insulation actually serves as a safeguard when short circuits or broken wires occur within the walls. As a result, it helps prevent fires that are caused by sparks from short circuits or broken wires.

**WATER-REPELLENT**—In a recent test by Pittsburgh Testing Laboratory, a sample of Eagle-Picher insulation was submerged in water to a depth of one inch for two hours, in accordance with Test Procedure C-209 of the American Society for Testing Materials. The vapor absorption of the insulation under these test conditions was only 0.6% by volume, clearly indicating its remarkable water repellency.

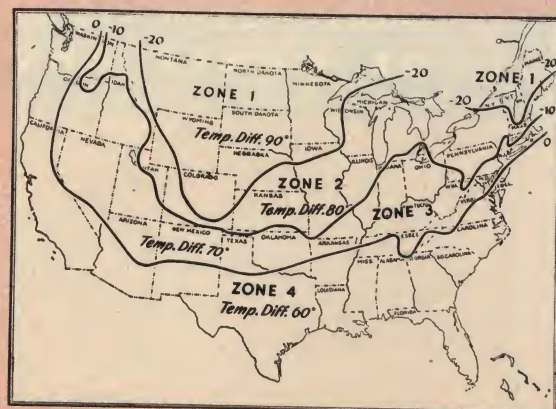
**SOUND-DEADENING**—Although not usually considered an acoustical material, Eagle-Picher Insulation provides valuable assistance in helping to reduce sound transmission through areas in which it is installed—helps keep out the unpleasant din of street cars, buses, car horns, and other noises.

**NON-SETTLING**—The springy, resilient fibers of Eagle-Picher Mineral Wool help this insulation hold its position in sidewalls and slopes, keeping the heat barrier intact and free from voids or "settled" uninsulated areas where heat might leak through.

### FULL-THICK EAGLE-PICHER INSULATION BRINGS THE GREATEST SAVINGS

The heat-stopping ability of any non-reflective insulating material, whether rigid or fill type, increases in direct ratio with the thickness to which it is installed.

When Eagle-Picher Insulation is installed full-thick, it brings results which greatly exceed those produced by installations that merely meet Government minimum requirements. The accompanying map shows the various zones where fuel savings, made by full-thick Eagle-Picher Insulation, are of paramount importance as the temperature difference becomes greater.



THE EAGLE-PICHER COMPANY



# IT'S EXCLUSIVE...IT'S DIFFERENT

10a  
5

## THE *Eagle-Picher Certified* INSULATION JOB ASSURES THOROUGH PROTECTION

All insulations are not alike, and neither are supervisory controls of the methods by which various types are installed. The Eagle-Picher Company, through a contractual agreement with authorized applicators, offers home owners the Certified Insulation Job—a new, exclusive, complete method of installing insulation that assures maximum benefits, winter and summer.

Every Eagle-Picher Certified Job is, in effect, a "custom insulation application," actually designed for a specific home, and incorporating Eagle-Picher's established scientifically engineered specifications, the highest quality workmanship, and the exclusive use of permanent Eagle-Picher Mineral Wool Insulation.

Specially trained engineers actually study the design and construction of the house and prescribe necessary and adequate measures to insure thorough insulation and maximum protection. Eagle-Picher representatives are assigned to spot-check Certified Jobs to be certain they have been installed in strict accordance with Eagle-Picher's factory-engineered specifications.

### THE EAGLE-PICHER CERTIFIED JOB IS EXCLUSIVE IN 3 WAYS

**1. ENGINEERED SPECIFICATIONS**—Any good insulation job must be "tailored" to the construction of the house, if it is to produce maximum results and insure full satisfaction to the homeowner. Before every Certified Insulation Job is installed, competent engineers consider every detail of the house construction.

**Design**—The architectural style of the house, including dormers, floors over unexcavated areas, rooms over open porches or unheated garages, and similar construction details, make it imperative that individual consideration precede the installation of every Certified Insulation Job.

**Location**—is naturally an important factor. The geographic location of the house determines the seasonal temperature extremes which must be considered.

**Exposure**—of the house to strong winds or hot sun, and the degree of protection afforded by natural objects will also influence the engineering of a Certified Insulation Job.

**2. QUALITY WORKMANSHIP**—When an authorized Eagle-Picher contractor installs a Certified Insulation Job, the homeowner has assurance of expert workmanship. Thoroughly-trained "home comfort spe-



cialists" are equipped with the most modern blowing apparatus for pneumatic installations.

**3. QUALITY MATERIALS**—An Eagle-Picher Certified Insulation Job, pneumatically installed in the home, includes the exclusive use of fire-proof, water-repellent, permanent Eagle-Picher Mineral Wool Insulation. The material has the same lasting, efficient properties that are described in detail on Page 2.

### WHEN THE JOB IS COMPLETED The Homeowner Knows That

- proper areas have been insulated completely, assuring the homeowner of a thoroughly insulated house. No voids remain.
- only Eagle-Picher Insulation and top-grade auxiliary materials have been used.
- correct ventilation has been provided.
- the Eagle-Picher Insulation has been installed at the correct thickness and density for maximum efficiency.
- all work has been done neatly and carefully.
- maximum home comfort and fuel savings will result.

Lastly, when the home is completely insulated, the Eagle-Picher Contractor presents the homeowner with a signed certificate stating that the job has been performed in compliance with Eagle-Picher's rigid, engineering specifications—assurance that no corners have been cut in materials or workmanship.



Half Insulated

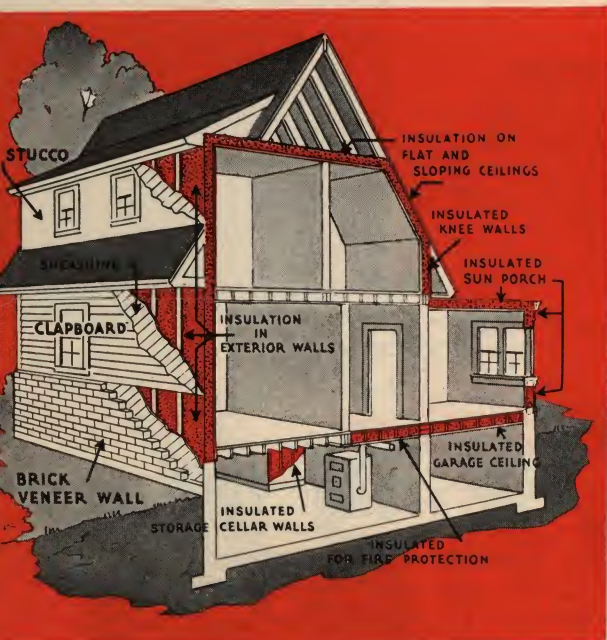


Two-thirds Insulated



Thorough Insulation





The exclusive Eagle-Picher Certified Insulation Job can be installed in new or existing homes only by the authorized Eagle-Picher Insulation Contractor.

The insulation is pneumatically blown into the roof and hollow side-wall spaces of the house. There is no muss, no fuss; quality workmanship and materials assure complete satisfaction. The Certified Insulation Job is synonymous with maximum, lasting efficiency—it provides thorough, uniform coverage at the correct density.

A quick observation of the illustration at the left is sufficient evidence of the value of COMPLETE insulation in the home. By providing COMPLETE insulation, the homeowner is able to enjoy the ultimate in year 'round comfort, health, protection and economy. Careful planning, based on a thorough engineering survey of the home, assures complete thermal protection with an Eagle-Picher Certified Insulation Job.

## GENERAL SPECIFICATIONS

### A. Insulating Materials

Mineral Wool insulation used shall be Eagle-Picher Home Insulation as furnished by The Eagle-Picher Sales Company, Cincinnati, Ohio, or by its Authorized Pneumatic Blowing Contractors. The different types of Eagle-Picher Home Insulation which may be used are:

Eagle-Picher Type H-1—Factory-Granulated Mineral Wool for pneumatic applications.

Eagle-Picher Type H-2—Loose Mineral Wool for blocking-off purposes and for application in irregular voids. Comes packed in 40 lb bags.

Eagle-Picher Type H-3—Water-proofed, paper-backed, Full-Thick Mineral Wool Batts for alternate applications in knee walls, unfinished roof rafters, unfinished gable ends.

### B. Auxiliary Materials

All auxiliary materials used in conjunction with the application of Eagle-Picher Insulation shall be of first class quality, free of defects.

### C. Workmanship

1. Eagle-Picher Home Insulation shall be installed only by authorized Eagle-Picher Contractors using approved equipment.
2. All Eagle-Picher Home Insulation materials shall be carefully installed by trained applicators. Workmanship shall be guaranteed first class and in strict accordance with instructions outlined in Eagle-Picher's Application Specifications and OPERATOR'S MANUAL.
  - a. Eagle-Picher Type H-1 shall be blown pneumatically to uniform, specified thickness so as to insure freedom of voids.
  - b. Eagle-Picher Type H-2 shall be installed uniformly (by hand) to fill irregular voids, for blocking-off purposes, and as otherwise required to supplement the pneumatic application.
  - c. Eagle-Picher Type H-3 Batts shall be installed snugly by hand between wood studs or joists when specified. The paper side of the Batts shall be placed against (or nearest) the warm-in-winter side of the area being insulated.

### D. Ventilation

Whenever practical, permanent ventilators shall be installed in all unheated areas located directly above the insulation line to exhaust accumulated heat (in summer) and excessive humidity (in winter).

- a. If natural ventilation is provided by means of louvers, they shall be of sufficient number, properly located, to insure cross ventilation.

- b. If rotary or turbine type ventilators are used, they shall be of size sufficient to remove six (6) cu ft of air per hr per sq ft of ceiling area.
  - c. In case of knee walls, ventilation should be supplied by one or a combination of these methods:
    1. Grilles under the eaves;
    2. Slant type louvers;
    3. Leaving a breathing space in every other slope.
- In all cases, the intake shall be twice as great as the exhaust.

### E. Alternate Methods of Insulating Upper Heat Loss Level

Variations in home construction and operating conditions may require different methods of insulating the Upper Heat Loss Level.

In a house having an unfinished attic not to be used for living quarters, Eagle-Picher Insulation shall be installed over the top floor ceiling. Interior partition walls, which are open to the attic space, should be suitably blocked off. Scuttle holes or trap doors shall be separately insulated. If drop ceilings are present they shall be insulated so that a continuous blanket of Eagle-Picher Insulation is provided. The unfinished attic space shall be ventilated.

Stairways leading from the attic to the floor below shall be treated in the following manner: A hinged trap door shall be provided at the top of the stairway, tightly fitted and insulated so as to prevent air infiltration or excessive heat transmission.

When there is a heated room in the attic, Eagle-Picher Insulation shall be installed over the top floor ceiling, down the slopes to the knee walls, the flats beyond the knee walls, and in the gable ends. Blocked-off, unheated areas, such as directly under the peak of the roof, or behind the knee walls, shall be adequately ventilated.

The exposed ceiling, sides, and face of dormers shall be insulated. When space behind one or both knee walls is desired for storage, Eagle-Picher Insulation shall be installed over the top-floor ceiling, then continuously downward between the roof rafters, over the storage space. The portion of the gable ends closing the heated area shall be insulated. When insulation is to be installed in an unfinished attic, which may be finished at a later date, the insulation shall be placed under the roof between the rafters, but not up to the peak of the roof. A collar beam shall be installed beneath the peak and the space above shall be insulated. Rafter spaces shall be blocked off carefully at the eaves.



## APPLICATION SPECIFICATIONS

### A. Upper Heat Loss Level

1. Ceiling of Top Floor
  - a. Open flat areas shall be insulated pneumatically with Eagle-Picher Insulation Type H-1, applied between joists to a nominal thickness of four (4) in. The thickness shall be checked carefully on completion of the blowing. When specified, the wool shall be uniformly leveled between the joists.
2. Roof Rafters or Slopes
  - a. Finished rafters or slopes shall be insulated with Eagle-Picher Insulation Type H-1, installed pneumatically to full rafter thickness.
  - b. Unfinished rafters or slopes shall be covered with a suitable vapor barrier, well lapped and secured in place with lath, plaster board, or wires laced in zig-zag fashion between nails spaced on six (6) to eight (8) in. centers. Eagle-Picher Insulation Type H-1 shall then be installed pneumatically to full rafter thickness.
3. Knee Walls.
  - a. Knee walls shall be covered with a suitable retaining material, applied over the exposed face of the studs. Eagle-Picher Insulation Type H-1 shall be installed pneumatically to completely fill each stud space. Open joist spaces located directly beneath the knee walls shall be blocked off with Eagle-Picher Insulation Type H-2, as required to protect the living quarters against air infiltration.
4. Flat Beyond Knee Wall
  - a. Flat areas between the knee walls and the exterior walls shall be insulated pneumatically with Eagle-Picher Insulation Type H-1, applied between the joists to a nominal thickness of four (4) in.
5. Dropped Ceilings and Exposed Interior Walls.
  - a. Dropped ceilings shall be insulated in the same manner as Ceiling of Top Floor.
  - b. Exposed interior walls, such as those adjacent to dropped ceilings, shall be insulated in the same manner as Knee Walls, described under No. 3. Insulation on exposed interior walls shall be joined continuously with the insulation on adjacent specified areas to protect the living quarters against air infiltration.
6. Scuttle Holes, Trap Door or Stairway
  - a. Scuttle holes or trap doors leading into the attic from the living quarters shall be insulated with Eagle-Picher Insulation Type H-3 Batts.
  - b. Stairways shall be blocked off by installing a hinged trap door to cover the entire stairway opening.
7. Dormers
  - a. Dormer ceilings shall be insulated pneumatically with Eagle-Picher Insulation Type H-1, applied between ceiling joists to a nominal thickness of four (4) inches.
  - b. Finished dormer sides and faces shall be insulated pneumatically with Eagle-Picher Insulation Type H-1, blown between studs to full stud thickness.
  - c. Unfinished dormer sides shall be insulated in accordance with specifications outlined for Knee Walls, described under No. 3.
8. Gable Ends
  - a. Finished gable ends shall be insulated pneumatically with Eagle-Picher Insulation Type H-1, installed to full stud thickness. Refer to Specifications for Exterior Walls, described under No. 9.

be insulated in the same manner as Exterior Walls, described under No. 9. The floor of bays shall be insulated in the same manner as Floor Overhangs, described under No. 10.

13. Exposed Floor Above Unheated, Unexcavated Basement
  - a. Accessible exposed floors located above unheated, unexcavated basement areas shall be insulated with Eagle-Picher Type H-3 Batts. Batts shall be installed snugly between the joists and securely wired in place. Exposed portions of the joists (ends or sides) shall be blocked off with Eagle-Picher Insulation Type H-2, as required, to protect the living quarters against air infiltration.
14. Adjoining Garage
  - a. Finished walls separating the garage from the living quarters of the house shall be insulated with Eagle-Picher Insulation Type H-1, pneumatically applied to full stud thickness in the same manner as Side Walls, described under No. 9.
  - b. Finished garage ceilings located directly beneath the living quarters shall be insulated pneumatically with Eagle-Picher Insulation Type H-1, blown between joists to a nominal thickness of four (4) in. Exposed portions of the joists (ends or sides) shall be blocked off as required.



Flat Attic Areas



Siding

Brick Veneer

Stucco

### B. Lower Heat Loss Level

9. Exterior Walls
  - a. The hollow space between studs shall be filled the full stud thickness with Eagle-Picher Insulation Type H-1, applied pneumatically.
10. Floor Overhang
  - a. Eagle-Picher Insulation Type H-1 shall be blown pneumatically between joists to a minimum nominal thickness of four (4) in. Exposed portions of the joists (ends or sides) shall be blocked off, as required, with Eagle-Picher Insulation Type H-2.
11. First Floor Flat and Sloping Ceilings
  - a. Exposed first floor flat and sloping ceilings shall be insulated with Eagle-Picher Insulation Type H-1, blown pneumatically between joists to a nominal thickness of four (4) in.
12. Bays
  - a. The ceiling of bays shall be insulated with Eagle-Picher Insulation Type H-1, blown pneumatically between joists to a nominal thickness of four (4) in. The sides and face of bays shall

COMPARATIVE INSULATING VALUES

WALL-THICK	Eagle-Picher Insulation, as applied in walls.
1/2"	Insulating Wallboard.
6 1/2"	Frame Wall (3/4-inch drop siding, paper, 1-inch wood sheathing, studs, 1-inch matched boards.)
8"	Brick Veneer Wall (4-inch brick, wood sheathing, studs, interior finish.)
8"	Solid Brick Wall (no finish.)
6"	Stucco Wall (1-inch stucco, wood sheathing, studs, interior finish.)

Comparison of common building materials shows why homes need Eagle-Picher Insulation.



Eagle-Picher Type H-3 Insulating Batts are designed for rapid, low cost application, particularly in new homes under construction. They can be installed in sidewalls, under roof rafters, over ceilings, under floors, and in knee walls.

These efficient, light-in-weight Paper-Backed Insulating Batts are manufactured from carefully selected minerals and processed at high temperatures. They possess the same remarkable, lasting properties as Eagle-Picher Type H-1 Granulated Wool and Eagle-Picher Type H-2 Loose Mineral Wool. Composed of water-repellent, fireproof Eagle-Picher Mineral Wool, they are backed on one side by an efficient vapor barrier. They are available as Full-Thick Batts and Semi-Thick Batts, designed to fit snugly between joists or studs spaced on 16 in. centers.

## EAGLE-PICHER BATTS ARE EASY TO INSTALL

Eagle-Picher Insulating Batts provide a quick, convenient, easy way of applying Eagle-Picher Mineral Wool Insulation in new homes and for certain applications in old homes. They are easily cut with a knife or shears; ends are accurately manufactured to help maintain a continuous, unbroken blanket of insulation. Eagle-Picher Insulating Batts are flexible—they can be curved to fit ordinary variations in wall surfaces.

## EFFICIENT VAPOR BARRIER

Eagle-Picher Type H-3 Insulating Batts offer an additional advantage with the efficient vapor barrier, manufactured



of a special, asphalt coated paper. This paper is placed closest to the inner or warm side of the wall, ceiling or floor, acting as a seal against the passage of water vapor. 1 1/2 in. flanges hold the Batts in place, when lapped over the studs and tacked.

## GENERAL INSTRUCTIONS AND SPECIFICATIONS

### MATERIALS

Insulation shall be Eagle-Picher Insulation as furnished by The Eagle-Picher Company, Cincinnati, Ohio, or by its authorized outlets.

### EAGLE-PICHER TYPE H-3 BATTS

For quick, easy application in new construction.

SIZE	BATTS PER PKG.		SQ FT NET AREA	
	FULL-THICK	SEMI-THICK	FULL-THICK	SEMI-THICK
15 in. x 24 in.	12	18	30	45

Integral vapor barrier on one side. Flanges 1 1/2 in. wide are provided along two edges of the vapor barrier to facilitate tacking in position.

### WORKMANSHIP

#### Manual Installation

Eagle-Picher Batts shall be applied uniformly to specified thickness in accordance with the installation methods described here.

### WORK INCLUDED

Eagle-Picher Insulation shall be installed in accordance with Eagle-Picher's Application Specifications to provide a continuous blanket of insulation over the exposed areas specified below.

(Note: Delete those areas and applications not applying.)

#### 1. Attics

- (a) Between all ceiling joists.
- (b) Between all rafters.
- (c) Between all studding in gable ends, exposed closets, dormers.

#### 2. Exterior Walls

- (a) Between studding in all walls from foundation to roof.
- (b) Between studding in ..... (state) walls from ..... (state) story to ..... (state) story.
- (c) State any additions or exceptions.

#### 3. Interior Walls

- (a) Between studding in ..... (state) wall from ..... (state) floor to ..... (state) floor in ..... (state) rooms.
- (b) State any additions or exceptions.

#### 4. Suspended Ceilings

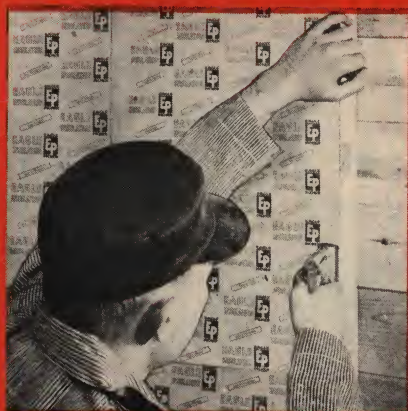
- (a) Between supporting members over finished ceiling.
- (b) Between supporting members as construction work progresses.
- (c) State any additions or exceptions.

#### 5. Miscellaneous Areas

- (a) (State other work to be included.)



## HOW TO INSTALL EAGLE-PICHER TYPE H-3 BATTS



**STARTING**—For best results, begin at the floor and work up when applying Eagle-Picher Insulating Batts. Secure the sections firmly in place with tacks, lath nails or staples, which should be spaced on centers not greater than 6 in.



**ATTIC FLOORS**—The vapor barrier should always face down in open attic floors, closest to the heated portion of the house. In floors over porches or unexcavated areas, the vapor barrier should face upward. No tacking or wiring is necessary.



**CEILINGS**—Wire reinforcement is preferable if the attic is to remain unfinished. When it is impossible to install the Batts from above the ceiling joists, they shall be placed from underside by pushing them between the joists.

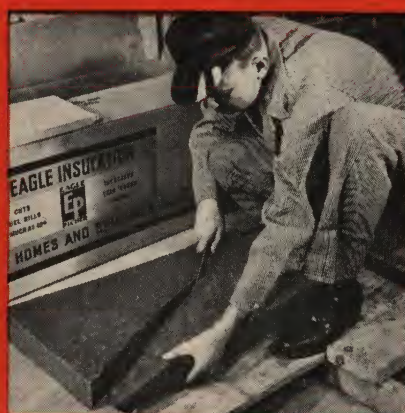
**PLACING**—Tuck the Batts snugly in all stud or joist spaces; then secure them in position by tacking the flanges to the face of the studs or joists. Butt all joints closely together, leaving no voids at the joints or top and bottom stud plates.

**VAPOR BARRIER**—The vapor barrier should face away from the outside temperatures. In roofs or top floor ceilings, it shall face downward; under cold floors, it shall face upward; in side-walls, it shall face toward the inside of the room.

**REINFORCING**—When Eagle-Picher Insulating Batts are installed overhead in unfinished areas, they shall be supported by lacing wire or stout cord between short nails spaced 16 in. apart. Over unheated areas, vapor-permeable paper may be used for the support.



**IRREGULAR SPACES**—Eagle-Picher Insulating Batts are easily cut with a knife or shears to fit irregular spaces. Flanges may also be cut to fit any triangular corners. Remaining small open spaces are to be filled with Eagle-Picher Type H-2 Loose Mineral Wool.



**SIDEWALLS**—Measure the lengths of the studs between ceiling and floor plates. Then add 3 in. to provide 1½ in. tacking space at the top and bottom. Cut the Insulating Batts and fit the vapor barrier snugly around all obstacles.



**END FLANGES**—These can easily be made by cutting through the insulation 1½ in. from the end, without cutting through the vapor barrier, which should then extend 1½ in. from the end of the insulation, forming a secure tacking flange.



**OTHER**

*Eagle-Picher*

**PRODUCTS**

**FOR GREATER HOME COMFORT**

**THE EAGLE-PICHER COMBINATION STORM WINDOWS AND STORM DOORS FOR WINTER PROTECTION**

A leader in the home insulation field, Eagle-Picher now offers other new home conditioning products—the Combination Storm Window and Screen and the Combination Storm and Screen Door.

The efficient Eagle-Picher Storm Window cuts fuel bills up to 30% during winter months and reduces cold drafts around window areas; the lightweight Storm Door provides a permanent weather-tight seal which virtually eliminates cold drafts around doorways. The window and door have lightweight screen insert panels which can be slipped into the permanent aluminum frames in a few seconds, from inside the house. In addition, the Storm Window is equipped with a special Tuk-Away feature which allows for simple, safe storing of either panel in the window frame. Eagle-Picher Storm Windows and Storm Doors provide distinctive beauty that blends harmoniously with any type house construction.

**THE EAGLE-PICHER AIR CHANGER FOR COOL, SUMMER COMFORT**

Statistics prove that summer's hot temperatures drop steadily during the night. With nature providing this cool air, homes can be cooled too, by drawing the air into the house.

The Eagle-Picher Air Changer keeps a large volume of this cool, constantly-changing air flowing through the home—providing cool, restful comfort.

This superior Air Changer differs from ordinary fans in construction and principle. As a result, it can be installed in basements or in attic spaces, having much less clearances than those required by typical attic fans. Its rust-proof, aluminum parts provide unusual lightness-in-weight, lasting durability and greater beauty. The motor and fan wheels are ball bearing supported. All moving parts are floated in rubber, and the blades are acoustically treated to give unusually quiet operation.

**MADE BY EAGLE-PICHER ...a leader in business since 1843**

Eagle-Picher Insulation and Home Conditioning Products, including the new, aluminum Combination Storm Window and Screen, and the Air Changer are manufactured by Eagle-Picher, an old and reputable company which has served the building and industrial trades with dependable and quality products for over a century.

Today, Eagle-Picher operates numerous plants located throughout the United States. It produces over 200 kinds of materials and ranks among the world's foremost manufacturers of lead, zinc, insulation and building mate-

rial products. Every Eagle-Picher Product is subjected to the most rigid laboratory and manufacturing control. Constant effort is exerted to reach still higher levels of quality and performance.

As a pioneer in home insulation, and a leader in the field of building material products, Eagle-Picher's modern, well-equipped Research laboratories have played a major role in developing the present high standards of efficiency and durability so characteristic of all Eagle-Picher Products.



**THE EAGLE-PICHER COMPANY**

HOME CONDITIONING PRODUCTS DEPARTMENT

**AMERICAN BUILDING • CINCINNATI 1, OHIO**

SALES OFFICES IN PRINCIPAL CITIES



Digitized by:



ASSOCIATION  
FOR  
PRESERVATION  
TECHNOLOGY,  
INTERNATIONAL  
[www.apti.org](http://www.apti.org)

BUILDING  
TECHNOLOGY  
HERITAGE  
LIBRARY

<https://archive.org/details/buildingtechnologyheritagelibrary>

From the collection of:

Carol J. Dyson, AIA